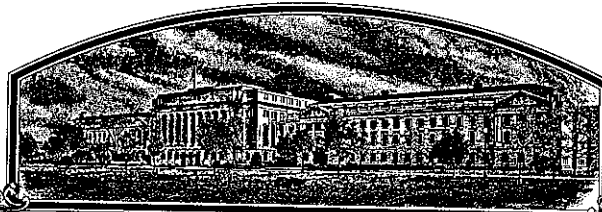


No.

8400137



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Asgrow Seed Company
Whereas, THERE HAS BEEN PRESENTED TO THE
Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT (PLANT VARIETY PROTECTION ACT, 1930, 46 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

SOYBEAN

'A2522'



In Testimony Whereof, I have hereunto set
my hand and caused the seal of the Plant
Variety Protection Office to be affixed
at the City of Washington
this 26th day of July in
the year of our Lord one thousand nine
hundred and eighty-five.

Attest

Kenneth H. ...
Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

John R. Blah
Secretary of Agriculture

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
WAREHOUSE & SEED DIVISION

FORM APPROVED: OMB NO. 0581-0055

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions on reverse)

1. NAME OF APPLICANT(S) Asgrow Seed Company		2. TEMPORARY DESIGNATION	3. VARIETY NAME A2522
4. ADDRESS (Street and No. or R.F.D. No., City, State, and Zip Code) 9620-190-25 Gull Road, Bldg. 190 Kalamazoo, MI 49001		5. PHONE (Include area code) 616-385-6605	FOR OFFICIAL USE ONLY PVPO NUMBER 8400137
6. GENUS AND SPECIES NAME Glycine max	7. FAMILY NAME (Botanical) Leguminosae		FILING DATE 8/22/84 TIME 8:30 <input checked="" type="checkbox"/> A.M. <input type="checkbox"/> P.M.
8. KIND NAME Soybean	9. DATE OF DETERMINATION September, 1979		FEE RECEIVED AMOUNT FOR FILING \$ 1,800.00 DATE 8/22/84 AMOUNT FOR CERTIFICATE \$ 200.00 DATE 7/9/85
10. IF THE APPLICANT NAMED IS NOT A "PERSON," GIVE FORM OF ORGANIZATION (Corporation, partnership, association, etc.) Corporation			12. DATE OF INCORPORATION March 22, 1968
11. IF INCORPORATED, GIVE STATE OF INCORPORATION Delaware			
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS John A. Batcha 9620-190-25 Asgrow Seed Company Gull Road, Bldg. 190 - Kalamazoo, MI 49001 PHONE (Include area code): 616-385-6605			
14. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED			
a. <input checked="" type="checkbox"/> Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)		c. <input checked="" type="checkbox"/> Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)	
b. <input checked="" type="checkbox"/> Exhibit B, Novelty Statement		d. <input checked="" type="checkbox"/> Exhibit D, Additional Description of the Variety	
15. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act.) <input type="checkbox"/> Yes (If "Yes," answer items 16 and 17 below) <input checked="" type="checkbox"/> No			
16. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> No		17. IF "YES" TO ITEM 16, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED? <input type="checkbox"/> Foundation <input type="checkbox"/> Registered <input type="checkbox"/> Certified	
18. DID THE APPLICANT(S) FILE FOR PROTECTION OF THE VARIETY IN THE U.S.? <input type="checkbox"/> Yes (If "Yes," give date) <input checked="" type="checkbox"/> No			
19. HAS THE VARIETY BEEN OFFERED FOR SALE OR MARKETING IN THE U.S. OR OTHER COUNTRIES? <input type="checkbox"/> Yes (If "Yes," give names of countries and dates) <input checked="" type="checkbox"/> No			
20. The applicant(s) declare(s) that a viable sample of basic seeds of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable. The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act. Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT John A. Batcha		DATE August 3, 1984	
SIGNATURE OF APPLICANT		DATE	

EXHIBIT A

Origin and Breeding History of A2522

- 1975-76 - Cross was made in the greenhouse at Ames, Iowa
(winter) PARENTS: Hodgson * S1492
- 1976 - F₁ generation grown at Ames, Iowa
- 1976-77 - F₂ and F₃ generations grown at Delray Beach, Florida
(winter)
- 1977 - F₄ generation grown at Ames, Iowa
- 1978 - F₅ generation grown at Ames, Iowa. Two-hundred plants were selected from the bulk population and threshed individually.
- 1979 - Progeny row GH76300-D79-35192 was selected for its uniformity, standability and disease resistance. This row was harvested in bulk and seeds were checked and verified for uniform seed coat luster and hilum color.
- It was in September, 1979, that GH76300-D79-35192 was determined to be a stable and unique line.
- 1980 - GH76300-D79-35192 was entered in the Preliminary P205 yield tests conducted at Ames and Sheldon, Iowa. It produced uniform stands and was selected for its very high yield and standability.
- 1981 - GH76300-D79-35192 was entered in the Strain S201 yield tests which were grown at 6 locations in Iowa, Minnesota and Indiana. It was selected as the highest yielding variety out of 50 entries in the test.
- GH76300-D79-35192 was assigned the maturity designation X2522.
- 1982 - X2522 was entered in the Variety V201 yield tests which were grown at 12 locations in Iowa, Minnesota, Illinois and Indiana. It was selected as the highest yielding variety out of 20 entries in the test.
- X2522 was nominated for pilot production and assigned the maturity designation XP2522. Nine pounds of Breeder seed were produced at Ames, Iowa. This Breeder seed was sent to Delray Beach, Florida for increase.

continued on back.....

Exhibit A continued...

1983 - XP2522 was entered in the Variety V201 yield tests which were grown at 16 locations in Iowa, Minnesota, Illinois, Indiana and Ohio. It was selected as the second highest yielding variety out of 20 entries in the test.

Foundation seed of XP2522 was produced near Perry, Iowa.

XP2522 was nominated for release and full production and assigned the designation A2522.

Trial evaluations since 1979 indicate A2522 is uniform and stable. As with other soybean varieties, variants can occur for almost any characteristic during the course of repeated sexual reproduction.

JEM:js

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EXHIBIT B

Novelty Statement Concerning A2522 Soybean

To our knowledge the soybean varieties that most closely resemble A2522 are S1492, A2680 and A2575. Characteristics which differentiate A2522 include, but are not necessarily restricted to, the following:

1. Flower Color:

A2522 = Purple
S1492 = White
A2680 = Purple
A2575 = Purple

2. Reaction to race 1 of Phytophthora megasperma Drechs.f.sp.
glycinea:

A2522 = Susceptible
S1492 = Susceptible
A2680 = Susceptible
A2575 = Resistant

3. Hypocotyl elongation (emergence):

	<u>Percent*</u>	<u>Score**</u>
A2522 =	92	1
S1492 =	94	1
A2680 =	8	5
A2575 =	2	5
Lsd.05	22	-

* Percentage of plants that emerged in 10 days
when planted 4" deep in pots of sterile sand
maintained at 25 C.

** Score based on emergence: 91% + = 1
71-90% = 2
41-70% = 3
21-40% = 4
20% - = 5

U.S. DEPARTMENT OF AGRICULTURE
 AGRICULTURAL MARKETING SERVICE
 LIVESTOCK, MEAT, GRAIN & SEED DIVISION
 PLANT VARIETY PROTECTION OFFICE
 BELTSVILLE, MARYLAND 20705

EXHIBIT C
 (Soybean)

OBJECTIVE DESCRIPTION OF VARIETY
 SOYBEAN (*Glycine max* L.)

NAME OF APPLICANT(S) Asgrow Seed Company	TEMPORARY DESIGNATION	VARIETY NAME A2522
ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code) 9620-190-25 Gull Road, Bldg. 190 Kalamazoo, MI 49001		FOR OFFICIAL USE ONLY PVPO NUMBER 8400137

Choose the appropriate response which characterizes the variety in the features described below. When the number of significant digits in your answer is fewer than the number of boxes provided, place a zero in the first box when number is 9 or less (e.g.,).

1. SEED SHAPE:



1 = Spherical (L/W, L/T, and T/W ratios = ≤ 1.2)
 3 = Elongate (L/T ratio > 1.2 ; T/W = ≤ 1.2)

2 = Spherical Flattened (L/W ratio > 1.2 ; L/T ratio = ≤ 1.2)
 4 = Elongate Flattened (L/T ratio > 1.2 ; T/W > 1.2)

2. SEED COAT COLOR: (Mature Seed)

1 = Yellow

2 = Green

3 = Brown

4 = Black

5 = Other (Specify) _____

3. SEED COAT LUSTER: (Mature Hand Shelled Seed)

1 = Dull ('Corsoy 79'; 'Braxton')

2 = Shiny ('Nebsoy'; 'Gasoy 17')

4. SEED SIZE: (Mature Seed)

Grams per 100 seeds

5. HILUM COLOR: (Mature Seed)

1 = Buff

2 = Yellow

3 = Brown

4 = Gray

5 = Imperfect Black

6 = Black

7 = Other (Specify) _____

6. COTYLEDON COLOR: (Mature Seed)

1 = Yellow

2 = Green

7. SEED PROTEIN PEROXIDASE ACTIVITY:

1 = Low

2 = High

8. SEED PROTEIN ELECTROPHORETIC BAND:

1 = Type A (SP1^a)2 = Type B (SP1^b)

9. HYPOCOTYL COLOR:

1 = Green only ('Evans'; 'Davis')

2 = Green with bronze band below cotyledons ('Woodworth'; 'Tracy')

3 = Light Purple below cotyledons ('Beeson'; 'Pickett 71')

4 = Dark Purple extending to unifoliate leaves ('Hodgson'; 'Coker Hampton 266A')

10. LEAFLET SHAPE:

1 = Lanceolate

2 = Oval

3 = Ovate

4 = Other (Specify) _____

11. LEAFLET SIZE:

☐ 21 = Small ('Amsoy 71'; 'A5312')
3 = Large ('Crawford'; 'Tracy')

2 = Medium ('Corsoy 79'; 'Gasoy 17')

12. LEAF COLOR:

☐ 21 = Light Green ('Weber'; 'York')
3 = Dark Green ('Gnome'; 'Tracy')

2 = Medium Green ('Corsoy 79'; 'Braxton')

13. FLOWER COLOR:

☐ 2

1 = White

2 = Purple

3 = White with purple throat

14. POD COLOR:

☐ 2

1 = Tan

2 = Brown

3 = Black

15. PLANT PUBESCENCE COLOR:

☐ 1

1 = Gray

2 = Brown (Tawny)

16. PLANT TYPES:

☐ 21 = Slender ('Essex'; 'Amsoy 71')
3 = Bushy ('Gnome'; 'Govan')

2 = Intermediate ('Amcor'; 'Braxton')

17. PLANT HABIT:

☐ 3

1 = Determinate ('Gnome'; 'Braxton')

2 = Semi-Determinate ('Will')

3 = Indeterminate ('Nebsoy'; 'Improved Pelican')

18. MATURITY GROUP:

☐ 0 ☐ 51 = 000
9 = VI2 = 00
10 = VII3 = 0
11 = VIII4 = I
12 = IX5 = II
13 = X

6 = III

7 = IV

8 = V

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

BACTERIAL DISEASES:

☐ 0Bacterial Pustule (*Xanthomonas phaseoli* var. *sojensis*)☐ 0Bacterial Blight (*Pseudomonas glycinea*)☐ 0Wildfire (*Pseudomonas tabaci*)

FUNGAL DISEASES:

☐ 0Brown Spot (*Septoria glycines*)Frogeye Leaf Spot (*Cercospora sojae*)☐ 0

Race 1

☐ 0

Race 2

☐ 0

Race 3

☐ 0

Race 4

☐ 0

Race 5

☐

Other (Specify)

☐ 0Target Spot (*Corynespora cassicola*)☐ 0Downy Mildew (*Peronospora trifoliorum* var. *manshurica*)☐ 1Powdery Mildew (*Microsphaera diffusa*)☐ 1Brown Stem Rot (*Cephalosporium gregatum*)☐ 0Stem Canker (*Diaporthe phaseolorum* var. *caulivora*)

19. DISEASE REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant) (Continued)

FUNGAL DISEASES: (Continued)

☐Pod and Stem Blight (*Diaporthe phaseolorum* var. *sojae*)☐Purple Seed Stain (*Cercospora kikuchii*)☐Rhizoctonia Root Rot (*Rhizoctonia solani*)Phytophthora Rot (*Phytophthora megasperma* var. *sojae*)☐

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

Race 5

☐

Race 6

☐

Race 7

☐

Race 8

☐

Race 9

☐

Other (Specify) _____

VIRAL DISEASES:

☐

Bud Blight (Tobacco Ringspot Virus)

☐

Yellow Mosaic (Bean Yellow Mosaic Virus)

☐

Cowpea Mosaic (Cowpea Chlorotic Virus)

☐

Pod Mottle (Bean Pod Mottle Virus)

☐

Seed Mottle (Soybean Mosaic Virus)

NEMATODE DISEASES:

Soybean Cyst Nematode (*Heterodera glycines*)☐

Race 1

☐

Race 2

☐

Race 3

☐

Race 4

☐

Other (Specify) _____

☐Lance Nematode (*Hoplolaimus Colombus*)☐Southern Root Knot Nematode (*Meloidogyne incognita*)☐Northern Root Knot Nematode (*Meloidogyne Hapla*)☐Peanut Root Knot Nematode (*Meloidogyne arenaria*)☐Reniform Nematode (*Rotylenchulus reniformis*)☐

OTHER DISEASE NOT ON FORM (Specify): _____

20. PHYSIOLOGICAL RESPONSES: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐

Iron Chlorosis on Calcareous Soil

☐

Other (Specify) _____

21. INSECT REACTION: (Enter 0 = Not Tested; 1 = Susceptible; 2 = Resistant)

☐Mexican Bean Beetle (*Epilachna varivestis*)☐Potato Leaf Hopper (*Empoasca fabae*)☐

Other (Specify) _____

22. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED.

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant Shape	S1492	Seed Coat Luster	S1492
Leaf Shape	S1492	Seed Size	A2943
Leaf Color	S1492	Seed Shape	A2943
Leaf Size	S1492	Seedling Pigmentation	Hodgson

23. GIVE DATA FOR SUBMITTED AND SIMILAR STANDARD VARIETY: Paired Comparison Data

VARIETY	NO. OF DAYS MATURITY	PLANT LODGING SCORE	CM PLANT HEIGHT	LEAFLET SIZE		SEED CONTENT		SEED SIZE G/100 SEEDS	NO. SEEDS/ POD
				CM Width	CM Length	% Protein	% Oil		
A2522 Submitted	128	2.4	97	4.9	10.2	41.2	18.6	15.7	
S1492 Name of Similar Variety	128	2.4	91	5.1	11.0	42.6	18.6	16.2	

PUBLICATIONS USEFUL AS REFERENCE AIDS FOR COMPLETING THIS FORM:

1. Caldwell, B.E., ed. 1973. Soybeans: Improvement, Production, and Uses. Amer. Soc. Agron. Monograph No. 16.
2. Buttery, B.R. and R.I. Buzzell. 1968. Peroxidase activity in seeds of soybean varieties. Crop Sci., 8: 722-725.
3. Hymowitz, T. 1973. Electrophoretic analysis of SBTI-A₂ in the USDA soybean germplasm collection. Crop Sci., 13: 420-421.
4. Payne, R.C. and L.F. Morris. 1976. Differentiation of soybean cultivars by seedling pigmentation patterns. J. Seed Technol. 1: 1-19.

EXHIBIT D

Additional Description of the Variety

A2522 is a mid Maturity Group II cultivar that possesses outstanding and consistent yields relative to other cultivars of similar maturity. It combines good standability and emergence with increased yield potential to provide farmers a superior alternative to many widely grown mid Group II cultivars.

JEM:js